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ABSTRACT

These 24 standards have been adopted by the Automotive Service Industry Association to provide well-planned, properly supervised training for apprentices to develop into competent machinists. The goal of the standards is to establish and maintain high criteria of workmanship, to develop knowledge by workers of technical and theoretical aspects of their craft, and to assure the employer of proficient workmen. Appendixes include forms for application for apprenticeship and employment interview evaluation, a curriculum of related technical instruction, and address listings of regional offices of the Bureau of Apprenticeship and Training and of state and territorial apprenticeship agencies. (MS)

ED 080873

CE

National Apprenticeship Standards for Automotive Machinist

U. S. Department of Labor

U.S. DEPARTMENT OF HEALTH
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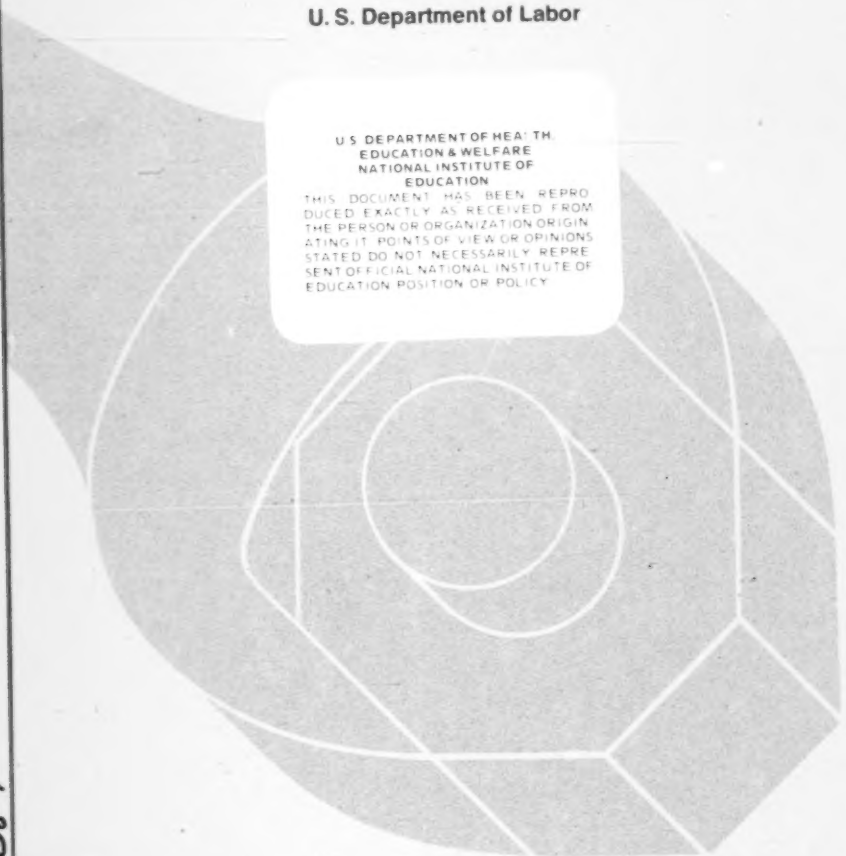

Manpower Administration

CE 000 087

ED 080873

National Apprenticeship Standards for Automotive Machinist

Developed by the Automotive Service Industry Association, in accordance with the recommended standards of the Bureau of Apprenticeship and Training, U.S. Department of Labor.

U. S. Department of Labor
Peter J. Brennan, Secretary
Manpower Administration
Bureau of Apprenticeship and Training
1973

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PREFACE

These standards of apprenticeship, adopted by the Automotive Service Industry Association, are formulated to provide well-planned, properly supervised training for apprentices in order to develop competent automotive machinists to meet present and future needs; they have as their broad purpose the establishment and maintenance of high standards of workmanship, the development of knowledge in the workers of those technical and theoretical aspects of their craft which will equip them for profitable employment, and furtherance of assurance to the employer of proficient workmen to the end that the public may receive the best quality workmanship.

The Association therefore recommends adoption of the following training plan for all its members and urges them to dedicate their efforts to utilizing and sustaining these standards for the benefit of the industry.

U.S. DEPARTMENT OF LABOR
MANPOWER ADMINISTRATION
WASHINGTON, D.C. 20210

January 9, 1973

Mr. Mel Turner
Manager
Heavy Duty Division
Automotive Service Industry Association
230 North Michigan Avenue
Chicago, Illinois 60601

Dear Mr. Turner:

It gives me great pleasure to inform you that the revisions in your Association's National Standards of Apprenticeship are consistent with the basic requirements and equal employment opportunity regulations of the Bureau of Apprenticeship and Training, U. S. Department of Labor.

You are to be commended for your continued efforts to improve the quality of apprenticeship in the automotive repair industry. I feel certain that local apprenticeship programs patterned after your national standards will bring lasting benefits to all concerned.

The staff of the Bureau of Apprenticeship and Training is available at any time to advise and assist the members of your association in establishing new or revising existing local programs of apprenticeship in accordance with your national standards. You can also be assured of the continued cooperation and assistance of our Bureau at the national level.

Sincerely,

HUGH C. MURPHY
Administrator
Bureau of Apprenticeship
and Training

APPROVED BY:

AUTOMOTIVE SERVICE INDUSTRY ASSOCIATION
230 North Michigan Avenue
Chicago, Illinois 60601

Name: Hal Tooner

Title: Manager, Heavy Duty Division

Date: January 5, 1973

NATIONAL APPRENTICESHIP STANDARDS [1] FOR AUTOMOTIVE MACHINIST

1. Definitions as Used Herein

Apprentice shall mean a person at least 18 years of age who has signed a written agreement with the employer to learn the trade of automotive machinist in accordance with the following standards.

Employer shall mean the establishment, company, or individual by whom the apprentice is employed and who is signatory to the local standards.

Registration agency shall mean a State apprenticeship agency recognized by the Bureau of Apprenticeship and Training; or, if no such recognized agency exists in the State, it shall mean the Bureau of Apprenticeship and Training, U.S. Department of Labor.

2. Qualifications for Apprenticeship

a. Applicants shall be at least 18 years of age.

b. Applicants shall be high school graduates or possess a certificate of equivalency.

c. Applicants must be physically fit to perform the work of the trade, as evidenced by a doctor's examination.

d. Prior to employment, each applicant must be bonded by a private, recognized insurance company.

e. Applicants must be adept in arithmetic, capable of clear expression, and able to read well and write legibly, as proven by a written test.

3. Equal Opportunity in Apprenticeship

All programs of apprenticeship registered with the Bureau of Apprenticeship and Training or recognized State apprenticeship

[1] Local application of these national standards in States having State apprenticeship councils may require modifications to meet the standards of apprenticeship in such States. The staffs of the Bureau of Apprenticeship and Training and the State apprenticeship agencies are available to advise on such standards.

agencies shall include in their standards the following equal opportunity pledge:

> The recruitment, selection, employment, and training of apprentices during their apprenticeship shall be without discrimination because of race, color, religion, national origin, or sex. The sponsor will take affirmative action to provide equal opportunity in apprenticeship and will operate the apprenticeship program as required under title 29 of the Code of Federal Regulations (CFR), part 30, as amended.

In addition to establishing qualification standards, each local program sponsor employing five or more apprentices shall develop and adopt an affirmative action plan, including goals and timetables if analysis indicates underutilization of minorities; the sponsor shall also adopt a selection method consistent with the requirements of title 29, CFR, part 30, as amended. (A sample selection procedure is included in section 5 of these standards.)

The local sponsor of a program in which fewer than five apprentices are indentured is required only to adopt the above equal opportunity pledge.

4. Term of Apprenticeship

The term of apprenticeship shall be 4 years (approximately 8000 hours), consisting of eight (8) 6-month (1000-hour) periods of reasonably continuous employment. Such term shall include a probationary period (see section 10) and not less than 144 hours of related instruction per year (see appendix C).

5. Selection Procedures

a. Information regarding apprenticeship openings and requirements shall be furnished by the employer to the local schools, the public employment service, and the Apprenticeship Information Center (if one is established locally), and their cooperation requested in referring suitable candidates.

b. Applicants who meet the minimum qualifications as to bondability, age, education, and physical condition shall be referred to the local employment service office for aptitude testing.

c. Applicants who qualify on the aptitude tests shall be interviewed by the employer or his designated representative for purposes of evaluating and rating the applicants' qualifications. During the course of the interview qualifications shall be evaluated, and points accordingly awarded, as follows:

	Maximum points
Education (Applicant shall provide high school diploma or equivalency certificate, along with transcript.)	
Subjects studied pertinent to the trade (C average or better):	20
Mathematics 10	
Mechanical Drawing 5	
English Composition 5	
Physical fitness (as evidenced by a doctor's certificate)	10
Aptitude tests (If actual scores are used, grade in relation to minimum qualifying score; otherwise, award maximum points to all qualifying.)	20
Past work experience	15
In the trade or related to the trade 10	
Trade school 5	
References (Schools, business people, or previous employers)	5
Veteran (Applicant shall furnish proof of honorable discharge.)	5
Oral interview (See appendix B, Interview Evaluation Form)	25

Any false statement shall be sufficient reason for disqualifying applicant.

d. Qualified applicants shall be selected in descending order of ranking. At least 30 days' public notice will be given prior to the initial date for application for admission to the apprenticeship program. No less than 2 weeks shall be allowed for accepting applications. All qualified applicants placed on a list of eligibles shall be retained on such list, subject to selection for a period of 2 years.

e. Records of the complete selection process, including interviews, shall be retained for a period of at least 5 years.

6. Related Technical Instruction

Apprentices shall attend related instruction classes for a minimum of 144 hours each year of the apprenticeship. (See appendix C.) Where feasible, these classes shall be set up by the employer in cooperation with the local school system.

Time spent in related instruction after regular working hours shall not be considered as hours of work. The apprentice will not be paid for such attendance unless required by applicable State law.

However, this will not prevent the employer from paying apprentices for related instruction time if he so desires.

The apprentice will be paid his regular hourly rate of pay when related technical instruction is conducted during normal working hours. Apprentices may also attend other training sessions conducted for shop personnel.

7. Apprentice Wages

Apprentices shall be paid at the following rates:

First 6 months	55% of the journeyman machinist rate
Second 6 months	60% of the journeyman machinist rate
Third 6 months	65% of the journeyman machinist rate
Fourth 6 months	70% of the journeyman machinist rate
Fifth 6 months	75% of the journeyman machinist rate
Sixth 6 months	80% of the journeyman machinist rate
Seventh 6 months	85% of the journeyman machinist rate
Eighth 6 months	90% of the journeyman machinist rate
Thereafter	The journeyman rate

These wage rates shall be considered minimum rates of pay; nothing herein shall prevent the employer from paying, or the apprentice from accepting, additional remuneration. In order for an apprentice to receive the above listed increases, he must show progress in the trade, to the satisfaction of the employer.

Where a bargaining agreement exists, apprentice rates shall be in accordance with said agreement.

8. Ratio of Apprentices to Journeymen

It is recommended that there be one apprentice to the shop, irrespective of the number of journeymen employed, plus additional apprentices in such ratio as may fit the physical shop setup, and needs of the employer; but not to exceed 1 additional apprentice to every 3 journeymen employed thereafter. In no case will there be more apprentices employed than can be thoroughly trained in all phases of the trade.

9. Apprenticeship Agreement [2/]

Each apprentice shall be covered by a written apprenticeship agreement with his employer and registered with the appropriate

2/ Some State agencies require the use of their own apprenticeship agreement forms. In such instances, the agreement forms may be obtained from the State apprenticeship agency or the Bureau of Apprenticeship and Training.

registration agency.

The agreement entered into under these standards shall contain a provision making the terms and conditions of the standards a part thereof. For this reason the apprentice, his parent or guardian, and the employer shall be given an opportunity to read the standards.

10. Probationary Period

Apprentices employed under local programs shall be subject to a probationary period of 3 months of reasonably continuous employment. During the probationary period, the termination or cancellation of the apprenticeship agreement may be made at the request of either party to the agreement. After the probationary period, the agreement may only be cancelled for justifiable cause. The registration agency shall be advised of all cancellations of agreements and reasons therefor.

11. Periodic Examinations

An examination of apprentices shall be given before each period of advancement and at such other times as may be determined. In these examinations, consideration shall be given to related technical instruction attendance, progress, and daily employment records of the apprentice. In cases of failure on the part of the apprentice to fulfill his obligations as to related technical instruction attendance or grades, diligence or application to his work, or shop conduct, his agreement may be suspended or revoked.

In case of revocation or suspension of the apprenticeship agreement, the registration agency shall be notified.

12. Hours of Work

The hours of work for apprentices shall be the same as those for journeymen in the trade, and shall conform to all applicable laws and regulations.

No apprentice shall be allowed to work overtime if it interferes with his attendance at related technical instruction classes. Apprentices absent from the service of the employer through their own fault shall make up all such time lost before being advanced to the next period of apprenticeship.

13. Work Experience

During the term of apprenticeship, the apprentice shall be given such instruction and experience in all branches of the trade necessary to develop a competent, skilled automotive machinist. A

schedule of work processes shall adhere as nearly as possible to the following, but not necessarily in this sequence. This schedule may be modified relative to the equipment available in the shop.

		Approximate hours
A.	Entry Orientation:	250
	1. Safety.	
	2. Names, care, and use of hand tools.	
	3. Use, care, and calibration of measuring instruments.	
	4. Names and handling of parts, equipment, and supplies.	
	5. Care and sharpening of all types of drills and cutting tools.	
	6. Reading of catalogues and specification sheets.	
B.	Bench Assembly and Disassembly:	1500
	1. Cleaning methods.	
	2. Disassembly of engines, units, and parts.	
	3. Methods of crack inspection and detection.	
	4. Inspection for and selection of reusable parts.	
	5. Fitting, assembly, and adjustment of various engines.	
	6. Testing engines and making necessary adjustments.	
C.	Brake Drum Resurfacer, Riveting Machine, and Brake Shoe Grinder:	250
	1. Care, operation, and setup procedures.	
	2. Limits of drums and shoes.	
D.	Valve Refacing and Reseating Machines:	250
	1. Care and operation of machines.	
	2. Setup procedures for refacing and reseating valves, refacing rocker arm pads, etc.	
	3. Valve spring testing.	
E.	Valve Seat Counterboring Machine and Valve Seat Inserting Tools:	250
	1. Care and operation of the tools.	
	2. Procedures for removing old and installing new valve seat rings, including the threaded type.	
	3. Resizing of valve guides.	
	4. Replacement and reaming of valve guides (all types).	
	5. Proper procedures where valve guide is an integral part of the head.	
F.	Hydraulic Press:	50
	1. Care and operation of the machine.	
	2. Setup procedures.	
	3. Detailed procedures for various types of press operation.	

G. Drill Press: 50
   1. Care and operation of the machine.
   2. Methods of job setup.
   3. Proper procedure for drilling at various speeds and feeds.
   4. Sharpening of drills for different metals.

H. Piston Pin Fitting Machines: 250
   1. Reamer and reamer driver.
   2. Care and operation of the machines.
   3. Procedures for fitting (hand fit, press fit, etc.) the various types of piston pins.
   4. Recommended tolerances and assembly methods.

I. Clutch Rebuilding Machine: 200
   1. Care and operation of the machine.
   2. Proper machine setups.
   3. Clutch component repair operations.

J. Honing Machines, Hand Hones, and Cylinder Hones: 250
   1. Care and operation of the various types.
   2. Pin fitting by the honing method.
   3. Refinishing of brakes, engine cylinders, etc.

K. Connecting Rod Aligning and Reconditioning Machines: 250
   1. Care and operation of machines.
   2. Straightening, remachining, and aligning of connecting rods.
   3. Assembly of connecting rods and pistons.
   4. Installation of connecting rod bushing.

L. Piston Resizing Equipment: 50
   Expanding of piston O.D. to desirable tolerances by various methods.

M. Piston Regrooving Equipment: 50
   1. Machining of ring lands to desired size.
   2. Installation of various types of spacers.

N. Flywheel Resurfacer: 50
   1. Care and operation of the machine.
   2. Procedure to set up and reface flywheels.

O. Milling Machines and Surface Grinders: 250
   1. Care and operation of the machines.
   2. Setup procedures.
   3. Resurfacing of engine components such as heads, blocks, and manifolds.

P. Bearing Resizer: 250

1. Care, operation and setup of the machine.
2. Resizing of various types of bearings.
3. Rebabbiting procedures.

Q. Align Boring Machines: 500

1. Care and operation of the machines.
2. Proper machine setups.
3. Reconditioning of bearing caps; boring out of main bearing saddles to standard sizes.
4. Boring out of camshaft and main bearings; fitting of bearings and shims.

R. Engine Lathe: 500

1. Care and operation of the machine.
2. Job setup procedures.
3. Proper cutting tools for different jobs.
4. Rough turning and boring.
5. Finish turning face; bore; reaming and polishing.
6. Chasing threads, etc.

S. Piston Grinding Machine: 250

1. Care and operation of the machine.
2. Job setup procedures.
3. Grinding of various types of pistons.

T. Cylinder Boring Bars (Stationary and Portable): 500

1. Care and operation of the machines.
2. Setting up of machines for various types of jobs.
3. Grinding and setting of the tool.
4. Resleeving of various types of engines.

U. Crankshaft Grinding Machines (Stationary and Portable): 650

1. Care and operation of the machines.
2. Methods of machine setup.
3. Procedures for grinding different types of crankshafts, both in and out of the engine.
4. Polishing procedures.
5. Straightening of crankshafts.

V. Camshaft Grinding Machine: 650

1. Care and operation of the machine.
2. Machine and job setup.
3. Grinding of camshafts.

W.	Balancing Machine: 1. Care and operation of the machine. 2. Machine and job setups. 3. Balancing of engine components, assemblies, etc.	250
X.	Welding Equipment: 1. Care and operation of the equipment. 2. Welding techniques and services: Cold welding, crankshaft welding, gas welding, electric welding, etc.	250
Y.	Engine Dynamometer Testing Machine: 1. Care and operation of the machine. 2. Procedures for setting up and testing the various types of engines.	250
	Total Hours	8000

14. Credit for Previous Experience

All persons now employed as apprentices under a written or verbal agreement shall be placed under these standards and registered with the registration agency.

When apprentices who have had practical experience in the trade are employed, they may be granted credit toward the completion of apprenticeship, after evaluation on or before the end of the probationary period. Apprentices who receive credit for previous experience shall be paid the wage rate of the period to which such credit advances them.

15. Supervision of Apprentices

The employer may designate a supervisor of apprentices whose responsibility it shall be to see that the apprentice is given the necessary experience in all phases of the trade. The supervisor shall assign the apprentice to different mechanics or machinists as the flow of work permits and shall check the apprentice's attendance at related technical instruction classes, recording the same on forms adopted for this purpose.

16. Responsibility of Apprentice:

a. To perform diligently and faithfully the work of the trade and other pertinent duties assigned by the employer or foreman in accordance with the provisions of the local standards.

b. To respect the property and abide by the working rules and regulations of the employer.

c. To keep the work area, tools, equipment, and machinery in a safe and clean condition.

d. To complete satisfactorily the required instruction in subjects related to the trade, as provided under the local standards.

e. To maintain such records of work experience and training received on the job and in related instruction as may be required.

f. To develop safe working habits and conduct himself in his work in such manner as to assure his own safety and that of his fellow workers.

g. To conduct himself at all times in a creditable, ethical, and moral manner, realizing that much time, money, and effort will be spent in affording him an opportunity to become a skilled craftsman.

17. Continuity of Employment

When an apprentice is temporarily laid off due to business conditions, he shall be offered reinstatement before any additional apprentices are employed. An apprentice suspended for this reason, when reinstated, shall complete work set up in his training schedule before the work of the next period may be started.

18. Consultants

Employers may request the registration agency to designate consultants on special apprenticeship problems which affect those agencies represented by the consultants.

19. Adjusting Differences

In cases of dissatisfaction between the employer and the apprentice concerning his training, either party has the right and privilege to consult the registration agency for an interpretation of any provision in the standards over which differences occur.

20. Accident Prevention (Safety)

Apprentices shall receive instruction on accident prevention and safe working habits, both on the job and in related instruction, during the entire term of apprenticeship. Such instruction shall be coordinated with the work being performed, and tools and equipment being used, on the job.

21. Certificate of Completion of Apprenticeship

Upon successful completion of the apprenticeship under local programs, and passing of a suitable examination, apprentices shall be awarded a certificate attesting to their satisfactory completion. Certificates of completion are available from the registration agency

for all apprentices completing their apprenticeship under registered standards.

22. Official Approval

Before becoming operative, local programs shall have the official approval of the program sponsor(s) and be registered with the appropriate registration agency.

In cases where the emplover's machinists are represented by a union, then, when mutually agreed, such union shall participate with the employer in conducting the apprenticeship program. The local program can be worded where necessary to conform to the collective bargaining agreement in effect; nothing contained in such program shall be in conflict with the existing bargaining agreement. The union representing the machinists will then become signatory to the local program, with the ultimate aim of producing, through training, a competent machinist for the welfare of the employer, the union, and the public.

23. Modification of National Standards

These national standards may be amended at any time by action of the Automotive Service Industry Association. If such amendments are incorporated in local programs, they shall not alter apprenticeship agreements in effect in local programs at the time of the change without the express consent of all parties to such agreement. The registration agency shall be notified of all amendments to these national standards, as well as to local programs.

24. Conformance with State and Federal Laws

No section of these standards of apprenticeship shall be construed as permitting the violation of any law of the State or of the United States.

APPENDIX A

Application for Automotive Machinist Apprenticeship

Name (please print)_____ Social Security No. _____
Last First Middle

Address_____ City_____ Zip Code_____ How long?__

Age_____ Date of birth_____ City _____ Phone number_____

Height_____ Weight _____ Married ( ) Single ( ) Number of dependents

Present condition of health_____

Describe any physical defects_____

Armed Forces: Service Yes ( ) No ( ) How long?_____

Graduate from high school or vocational: Yes ( ) No ( ) When?_____
(Transcript required) If no, what grade completed_____

What courses did you take?_____

Have you ever been arrested? Yes ( ) No ( ) Charges _____
Have you ever been bonded? Yes ( ) No ( ) Ever been refused bond? Yes ( ) No

Have you ever applied for apprentice training before? Yes ( ) No ( )
If so, where?_____

Do you own a car? Yes ( ) No ( )

Last Address_____ City_____ State _____
How long?_____

List previous employment:

_____
Name of company Address

Number of months_____ Kind of work_____

_____
Name of company Address

Number of months _____ Kind of work _____

If accepted as automotive machinist apprentice, I agree to comply with the rules and regula of the standards of apprenticeship, take the required aptitude and oral test as part of the evalu system, and abide by the decisions and rules of the persons responsible for conducting the ap ticeship program.

Date _____ _____
(Signed)

APPENDIX B

Interview Evaluation by Employer or Local Training Committee

Points Allowed	0 poor	2 fair	3 avg.	4 good	5 excel.	Interviewer's Points Awarded
1. Sincerity of interest						
2. Attitude toward work						
3. Attitude toward related instruction						
4. Ability to work under supervision						
5. Understanding of responsibilities as an apprentice						
Interviewer's Total						

Average of Interview Rating by all Raters (2-25 pts.) . . . . . _____

Total Points Awarded . . . . . _____

_____
Signature of Interviewer(s)

_____

Date: _____ _____

APPENDIX C

Related Technical Instruction for Automotive Machinist

A curriculum of related subjects shall adhere as nearly as possible to the following for the first year—but not necessarily in this sequence. This schedule may be modified after the first year, to assist the apprentice in the fulfillment of his job obligations and the local or specialized requirements of the employer. The second, third, and fourth years of related instruction shall be established locally to complete the minimum of 576 hours.

		Hours
A.	On-the-job safety; good housekeeping.	2
B.	Industry familiarization and terminology.	2
C.	Names, care, and use of handtools.	2
D.	Fastener-size, threads, and head-type identification.	2
E.	Parts nomenclature and position in unit.	6
F.	Use of manufacturers' specification books, catalogues, and price lists.	6
G.	Precision measuring instruments; oversizes; undersizes.	6
H.	Engine structure, types, and materials.	4
I.	Engine theory and operation principles.	4
J.	Cooling systems; oil systems; fuel systems.	4
K.	Heat treatment of metals.	4
L.	Machine theory.	4
M.	Shop mathematics.	30
N.	Shop science.	30
O.	Blueprint reading.	20
P.	Calculation of markups and percentages.	6
Q.	Pricing of machine shop jobs.	6
R.	Customer relations; merchandising; related selling.	6
	Total	144

The hours allocated to each subject listed herein are a guide only. Such hours shall be in accordance with the practice of the training facilities used for related instruction. Institutional schedules usually involve more hours for each subject per school year than shown above.

REGIONAL OFFICES
BUREAU OF APPRENTICESHIP AND TRAINING

Location	States Served	
Region I John F. Kennedy Federal Bldg., Room 1703-A Government Center Boston, Mass. 02203	Connecticut Maine Massachusetts	New Hampshire Rhode Island Vermont
Region II 1515 Broadway, 37th Floor New York, N.Y. 10036	New Jersey New York	Puerto Rico Virgin Islands
Region III P.O. Box 8796 Philadelphia, Pa. 19101	Delaware Maryland Pennsylvania	Virginia West Virginia
Region IV 1371 Peachtree Street, NE., Room 700 Atlanta, Ga. 30309	Alabama Florida Georgia Kentucky	Mississippi North Carolina South Carolina Tennessee
Region V 300 South Wacker Drive, 13th Floor Chicago, Ill. 60606	Illinois Indiana Michigan	Minnesota Ohio Wisconsin
Region VI 1512 Commerce Street, Room 704 Dallas, Tex. 75201	Arkansas Louisiana New Mexico	Oklahoma Texas
Region VII Federal Office Bldg., Room 2107 911 Walnut Street Kansas City, Mo. 64106	Iowa Kansas	Missouri Nebraska
Region VIII Republic Bldg., Room 232-A 1612 Tremont Place Denver, Colo. 80202	Colorado Montana North Dakota	South Dakota Utah Wyoming
Region IX 450 Golden Gate Avenue, Room 9001 P.O. Box 36017 San Francisco, Calif. 94102	Arizona California	Hawaii Nevada
Region X Arcade Plaza Bldg., Room 2055 1321 Second Avenue Seattle, Wash. 98101	Alaska Idaho	Oregon Washington

STATE AND TERRITORIAL APPRENTICESHIP AGENCIES

Arizona Apprenticeship Council
1535 W. Jefferson St.
Phoenix, Ariz. 85007

Division of Apprenticeship Standards
Department of Industrial Relations
455 Golden Gate Ave.
San Francisco, Calif. 94102

Colorado Apprenticeship Council
200 E. Ninth Ave., Rm. 216
Denver, Colo. 80203

Apprentice Training Division
Department of Labor
200 Folly Brook Blvd.
Wethersfield, Conn. 06109

Delaware State Apprenticeship
and Training Council
Department of Labor and Industry
618 N. Union St.
Wilmington, Del. 19805

District of Columbia
Apprenticeship Council
555 Pennsylvania Ave., NW.
Washington, D.C. 20212

Bureau of Apprenticeship
Florida Dept. of Commerce
Caldwell Building
Tallahassee, Fla. 32304

Apprenticeship Division
Department of Labor and
Industrial Relations
825 Mililani St.
Honolulu, Hawaii 96813

Kansas Apprenticeship Council [1/]
Apprenticeship Training Division
Department of Labor
401 Topeka Blvd.
Topeka, Kans. 66603

Kentucky State Apprenticeship Council
Department of Labor
Capitol Plaza Tower
Frankfort, Ky. 40601

Apprenticeship Division
Department of Labor
State Capitol Annex
Baton Rouge, La. 70804

Maine Apprenticeship Council
Department of Labor and Industry
State Office Bldg.
Augusta, Maine 04330

Division of Apprenticeship and Training
Maryland Apprenticeship and Training
Council
Department of Labor and Industry
203 E. Baltimore St.
Baltimore, Md. 21202

Division of Apprenticeship Training
Department of Labor and Industries
State Office Bldg.
Government Center
Boston, Mass. 02202

Division of Voluntary Apprenticeship
Department of Labor and Industry
Space Center Bldg. - 5th Floor
444 Lafayette Road
St. Paul, Minn. 55101

Montana State Apprenticeship Council
Department of Labor and Industry
Helena, Mont. 59601

Nevada Apprenticeship Council
Department of Labor
Capitol Bldg.
Carson City, Nev. 89701

New Hampshire Apprenticeship Council
Department of Labor
1 Pillsbury St.
Concord, N.H. 03301

New Mexico Apprenticeship Council
Labor and Industrial Commission
1010 National Building
505 Marquette St., NW.
Albuquerque, N.M. 87101

New York State Apprenticeship Council
Bureau of Apprentice Training
Department of Labor
The Campus Bldg. #12
Albany, N.Y. 12226

Division of Apprenticeship Training
Department of Labor
Raleigh, N.C. 27602

Ohio State Apprenticeship Council
Department of Industrial Relations
220 Parsons Ave.
Columbus, Ohio 43215

Oregon State Apprenticeship and
Training Council
Bureau of Labor
Labor & Industries Bldg., Rm. 115
Salem, Ore. 97310

Pennsylvania Apprenticeship and
Training Council
Department of Labor and Industry
Harrisburg, Pa. 17120

Apprenticeship Division
Department of Labor
414 Barbosa Ave.
Hato Rey, P.R. 00917

Rhode Island Apprenticeship Council
Department of Labor
235 Promenade St.
Providence, R.I. 02908

Utah State Apprenticeship Council
Industrial Commission
431 S. Sixth East
Salt Lake City, Utah 84102

Vermont Apprenticeship Council
Department of Industrial Relations
State Office Bldg.
Montpelier, Vt. 05602

Division of Apprenticeship Training
Department of Labor and Industry
9th St. Office Bldg.
Richmond, Va. 23214

Washington Apprenticeship Council
Department of Labor and Industries
318 E. 4th Ave.
Olympia, Wash. 98504

Division of Apprenticeship Training
Box 2209
Madison, Wis. 53701

Virgin Islands Apprenticeship Council
Department of Labor
Christiansted, St. Croix, V.I. 00820

[1/] All agencies, with the exception of Kansas, operate under apprenticeship and/or training laws enacted by the legislature. The agency in Kansas functions under executive order of the Governor.

* GPO : 1973 O - 512-382 (88)

Certificate of Completion of Apprenticeship

United States Department of Labor

Bureau of Apprenticeship and Training

This is to certify that

has completed an apprenticeship in the trade of

under sponsorship of

in accordance with the standards recommended by the

Federal Committee on Apprenticeship

United States Department of Labor

Bureau of Apprenticeship and Training

NATIONAL APPRENTICESHIP AND TRAINING STANDARDS
OF THE
AUTOMOTIVE SERVICE INDUSTRY ASSOCIATION
Chicago, Illinois

Certificate of Registration

for the trade classification of AUTOMOTIVE MACHINIST

Issued in recognition of the above apprenticeship system, registered as part of the National Apprenticeship Program in accordance with the standards recommended by the

Federal Committee on Apprenticeship